A GUIDE TO CURA

MICROCOMPUTER RESOURCES

Spring 1989

cura

Center for Urban and Regional Affairs

by

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Spring 1989

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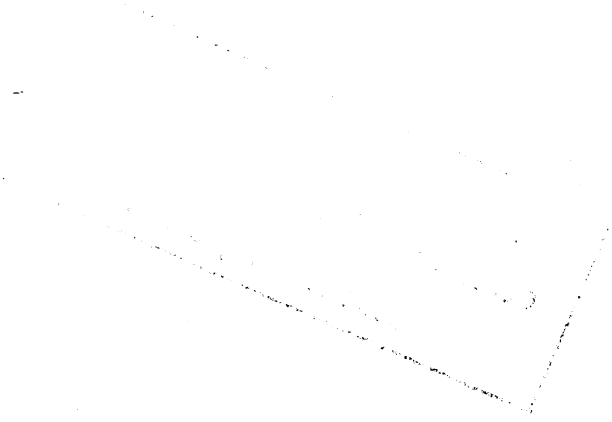

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INTRODUCTION

CURA provides its employees and projects with the most complete and powerful microcomputer resources available. This guide has been prepared to maximize the efficient use of this resource by: 1) providing a complete directory to all resources and 2) listing the policies that guide usage. Emphasis is on the IBM (and compatible) world, though Appendix D provides a brief glimpse at CURA's Macintosh resources. The guide should serve as an introduction to newcomers and as a reference book for old-hands. It is divided into five parts, plus appendices:

I. PEOPLE--Who is responsible for what. Where to get help.

II. POLICIES--Rules that govern the fair and efficient use of our limited resources.

III. SOFTWARE DIRECTORY--Computer programs directed toward specific tasks.

IV. DATA BASE DIRECTORY--Existing data files available on floppy disk for use by CURA personnel.

V. HARDWARE DIRECTORY--Computers and related equipment.

I. PEOPLE

Assistant Director Will Craig is the overall coordinator of CURA's microcomputer resources. Ultimately, he is responsible for coordinating purchases and solving problems. However, many others at CURA have specific responsibilities and can be more helpful in specific area.

Floppy disks are handled by Ann Kelley at the front desk. She will dispense new disks upon demand for any CURA project. New disks are unformatted, a task you will have to perform before you can use the disk. Recycled disks have been formatted (to remove old data) and are ready to use. Please recycle your disks back to her when you are finished with them.

Text and data entry are under the direction of Chris McKee. From letters to manuscripts to entry of survey data, she can organize the resources to complete the job. Priorities and job size affect turn-around time. These days, when many people enter their own text, the "Production Shop" is willing and able to proof the typing of others. See Policies section of this report.

Assistance with XyWrite, the dominant word processing package at CURA, is available from Louise Duncan. She is also willing to teach beginners.

Bibliographies and abstracts require special programs (FYI and Notebook) and special skills. Peggy Wolfe should be consulted on these topics.

Other software and hardware problems and questions also can be handled by Scott Parks. Make certain that this is the source of your problem before calling Scott, since he may not be able to respond immediately.

General assistance is always available through the University's Micro Lab in 125 Shepherd Lab. Software and hardware are available for experimentation. Many difficult questions can be answered. Telephone assistance is available, dial MICRO.

II. POLICIES

Below are listed CURA policies that allow for the most efficient and equitable uses of our limited computer resources.

A. ACCESS

1. These resources are for use by CURA personnel working on CURA projects.

2. They have also been made available to non-profit organizations to use on a short-term basis, but this use requires special arrangement. This option is especially useful for units that have a one-time need for unique features or who want to try out a resource before they buy.

B. MACHINE ORIENTED POLICIES

1. Once a machine is turned on, leave it on all day. Turning a machine on and off is harder on it than typing 100 pages. After 4:30, turn off your machine unless another person will use it immediately. For those machines plugged into a power strip, switch off that strip itself; do not use the switches on the machines themselves.

2. CURA has six types of computer installations, each with a primary use.

    a. A word processing station (324B, 324C and 324D). First come, first served.

    b. Scientific computers. A computer room (348) with the most powerful computers and printers. These are available on a first come, first served basis with a possibility for reservations. Except for a small computer available for accessing the laser printer, text processing can be bumped by any higher level application.

    c. Desktop publishing/production area. Off limits to all but assigned personnel.

    d. Accounting. Machines and software dedicated to tracking our budgets and expenditures.

    e. Portable machines which can be assigned to people for a limited period of time. Assignments handled by the front desk.

    f. Personal computers, assigned to a few individuals.

3. Use the DOS that comes with that machine. Otherwise machine failures may occur--and loss of data or text files.

a. On machines with a hard drive, never "boot"* with a floppy disk in either the A or B drives.

b. On a machine without a hard drive, make certain that the proper DOS system is on the disk in the A drive. Do not, for example, bring across a software upgrade from another machine where the disk has been formatted using the /S command which would put the other machine's DOS on this new disk.

4. CURA has a number of different font cartridges for its laser printers. All cartridges and requests for new cartridges are coordinated by Chris McKee.

5. Service contracts with ACSS--Engineering Services are carried only on basic, central equipment.

C. SOFTWARE

1. It is illegal and unethical to copy CURA software. If we need two copies to run simultaneously, we will buy a second copy. The cost of PC software is low in relation to its power.

2. CURA will usually purchase upgrades to software it owns and uses regularly.

3. CURA will consider reasonable requests for software purchases. Contact Will Craig.

4. Any illegal software found in use on CURA computers will be confiscated and destroyed. The single exception to this rule is short-term try-outs of software being considered for purchase.

D. RESPONSIBILITY FOR DATA FILES

1. Users have sole responsibility for maintaining their data files. Each important data file should have at least two current backups. Disk failures have occurred in the past and will occur again. (All data files are purged from the hard disks quarterly.)

2. When a project has been completed, the data becomes public. A copy must be given to CURA along with complete documentation. CURA agrees to maintain the files and support access by others.

E. DATA ENTRY

1. CURA has no data entry staff per se. Small jobs should be accomplished by project staff or by clerical staff if time is available.

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* A "boot" is accomplished when the machine is turned on or when the user simultaneously depresses the Control+ALT+Delete keys.

Outside contractors should be used on large jobs. Northwest Keypunch (379-7910) provides excellent quality and speed at very modest prices.

F. MANUSCRIPTS

When the author is creating a manuscript on computer and using the production team to turn out a final product, careful coordination is required. After the author does a first draft on computer it is best to turn the disk over to the production staff for basic editorial corrections/revisions (format, grammar, spelling, punctuation, etc.). Any subsequent revisions/changes are best handled by the author or editor marking a paper copy and turning it over to the production staff to make the changes on the disk. It is a waste of resources for the production team to correct one version of a chapter while the author is revising a newer version of the same chapter on computer.

G. HARD DISK POLICIES

The hard disks are necessary for using large programs and data files. They tend to become loaded with hundreds of files and disk space becomes exhausted. Individuals need to be as parsimonious as possible in their use of disk space. The following rules will keep things running smoothly.

1. Create and use a personal directory/subdirectory under the PUBLIC directory. Files found elsewhere will be purged. (This is especially important with CHART and ATLAS programs.)

2. Remove non-active files to keep space available where needed.

3. Never keep multiple copies (or backups) of either software or data on the hard disk. Download these to your floppy disk. If your problem is using files in different directories, ask for assistance.

4. At least once per quarter, more often if necessary, all personal files and directories will be purged.

5. Maintain backups of everything. We have experienced several hard drive crashes and will experience more in the future. No one has yet learned this lesson the easy way; you could be the first.

6. The PUBLIC directory should be "home" for most users. Personal directories originate here. Do not move to the root (C:) directory unless specifically instructed and trained.

7. Do not place any files or directories in "root" directories (e.g., \C:>).

H. ETIQUETTE

1. These resources have been purchased to support CURA work. Personal work is allowed on off-hours, if no one else is waiting for the resource. Because the portable machines are designed to be used in

off-hours, these never can be taken out for personal work.

2. Keep the workspace pleasant for others.

   a. Radio playing with ear phones only. Hold conversations elsewhere too.

   b. No eating, drinking, or smoking around the machines.

   c. Remove all physical traces when you leave the work area. Recycle what is appropriate. Trash or save everything else.

3. If you will be away from a machine for 15 minutes or more, close out your work (e.g. save file and quit), and return the machine to DOS (e.g., \C:\PUBLIC).

I. DISKS AND MANUALS

1. Software manuals are stored in the computer room, for the most part. DOS and manuals for software used exclusively by one unit (e.g., Ventura by the production unit) will be stored in that unit.

2. Manuals can <u>never</u> be removed from the CURA offices. Individuals may sign out manuals to use at their desks for periods of up to one week. Use the sign-out sheet in the cabinet.

3. All original software and data disks will be stored off-site. This protects us from theft and fire.

4. Key disks, tutorials, backups, and infrequently used files will be stored and accessible in the computer room. These disks can never be removed from the CURA offices and can be removed from the computer room only for short periods of time (e.g., 1-2 hours).

III. SOFTWARE DIRECTORY

"Software" is what tells the machine to work and how to proceed. These are the computer instructions, the computer program. Each piece of software is designed to perform a specific task. Given the amount of effort that went into producing each piece of software, the price is very low. No software may be copied for use outside the CURA shop. The capabilities of each of our software packages are mentioned briefly below. For ease of reading and finding software you might need, the software is organized by type.

A. WORD PROCESSING

Word processing software provides a way to produce, correct, format and print text. Text can range in length from single page letters to book-length reports. All word processing systems have basic text input and editing functions. Most have ways to remove, move or copy blocks of text. There are many ways to format the text and most programs try to show you what the printed output will look like while still on the monitor, though what you see is never exactly what you get. Word processors also have mail-merge capa-bilities where the name and address can be merged from a list to a form letter; this allows personalized form letters.

1. XyWrite III Plus (two manuals: one in production unit and one in the word processing station)

   XyWrite has become the word processor of choice at CURA for most applications. It is a system with many capabilities. It works well with the laser printer using all features: various fonts, proportional spacing, right justification, and column printing. It is fairly easy to learn the basics, but more complex page formatting and operations take time to learn. XyWrite has mail-merge capabilities. This version has a spell-checker and thesaurus.

2. Wordstar 3.3 (Ann Kelley has manual)

   Once considered the word processing standard, and still the most widely used word processor for microcomputers. It is a complete system, with easy to follow menus, but it is less efficient than XyWrite and others. It is not able to fully utilize the laser printer, but for basic tasks it works fine. Wordstar includes a mail-merge module.

3. Microsoft Word 4.0 (AUCA has manual)

   Word, like the others, is easy to get started with, but difficult to master. Word's main advantage is that it can fully utilize all the capabilities of the laser printer including a near-typeset look. Word is menu driven, has an excellent tutorial, and has on-line help. This program, too, has print merge capabilities and includes a spelling checker and thesaurus.

4. Word Perfect 5.0 (Louise Duncan has manual)

   This is the most popular package at the University. It is function driven, easy to use and very powerful. Spell-checker and thesaurus are included, plus an excellent on-line help facility and tutorial.

5. Ventura Publisher 2.0 (Louise Duncan has manual)

   Ventura allows true desk-top publishing. Documents are created in a word processor (e.g., XyWrite) and this package allows the operator to "typeset" and layout the final copy. Control is given over spacing between letters and between lines. Graphics may be inserted and text wrapped around the space taken. Ventura includes a simple word processing package to make corrections to the final copy and changes are communicated back to the original word processed file. See Appendix A for sample output. We participate in their priority support plan, which includes telephone assistance.

6. Aldous PageMaker (Louise Duncan has manual)

   The most popular desk-top publishing package. We have little experience with PageMaker at this point.

B. SPREADSHEETS

Spreadsheets are designed as tools for financial record keeping and analysis. They are basically a table of rows and columns with cells at each intersection. Each cell can be treated independently, but each row is usually an entry or record. Complex mathematical formulas can be placed in different cells to calculate summary information. When the value of a cell is changed, all the other cells that are affected by that value will also be recalculated.

1. Lotus 1-2-3, version 2 (Barbara Lukermann has manual)

   Lotus is the most popular spreadsheet. It allows large spreadsheets, includes a graphics module, and is faster than other spreadsheets. But it is also more complex and difficult to master.

2. Quattro (manual in computer room)

   This product builds on the Lotus structure, but is much more powerful, faster, and easier to use.

C. DATA BASE MANAGEMENT SYSTEMS

Data base management systems are designed to help organize large amounts of data. This can range from a mailing list to an inventory system, or a bibliography. Information in a data base is organized into records and fields. A record is one item, a single name and address, a field is part of a record,

the last name or the city. Data base systems have ways to access subsets of records and only certain fields (all the last names in Iowa). The data base can be sorted on fields or combinations of fields (zip code and state). Output, in the form of reports, can be generated for various needs (mailing labels, form letter headings).

1. dBase IV (manual in computer room)

   dBase IV is a complete, powerful, and complex program. It can easily do all the tasks mentioned above and much more. It is a menu driven system. Fields are of a fixed length (chosen when the data base is created) so the information in those fields must be able to fit in the pre-defined length. Also part of dBase is a programming language which allows further customization of the data base system. dBase IV improves on a good package by giving the user the power of dBase while eliminating the need to program.

2. PC File III Plus (manual in computer room)

   PC File is a very easy to use system with the main characteristics of dBase. It is menu driven, there are fixed length fields, you can sort on various fields and generate simple or complex reports. It does not have the programming language, and the number of the fields are limited to 70. PC File is good for mailing list systems or other tasks where it does not pay to spend the time learning dBase.

3. FYI 3000 Plus (Peggy Wolfe has manual)

   FYI is a free-field data base system with a maximum of three fields, but nearly unlimited information in each. Annotated bibliographies can be done in FYI, or text can be indexed for searches by FYI. FYI is not good where the data needs some structure. It's searches are very fast, but printed output cannot be customized. A word processor is used for the data entry and for designing output reports (Wordstar and XyWrite will work, Word will not). FYI is menu driven and easy to use. This latest version has full Boolean logic, nested parenthesis, browsing, and many other features.

4. Notebook II, version 3 (Peggy Wolfe has manual)

   Notebook II is a free-field data base with up to forty fields in each record and each record can be about ten pages long. Searches can be done for information in each field or in a combination of fields, but searches are fairly slow. The data base can be sorted by field. Report formats are quite flexible. Notebook is good for organizing bibliographies or research notes; it will work on mailing lists and other data bases. It is menu driven and fairly easy to use, though report formats cause some trouble.

   a. Bibliography. A companion to Notebook that reads citations in a manuscript file to create a properly organized and formated bibliography of works cited.

   b. BiblioTech. Another companion program for formating, punctuating, and proofreading bibliographies.

D. GRAPHICS

Graphics can be worth 1,000 words for a report whether written or oral. High quality black-and-white output can be produced on our laser printers; for written reports use paper, for oral presentations, transparencies. Colored output must be created outside CURA. Chart and Atlas can yield either black-and-white or colored results. Color output can be obtained off-site:

- color-jet printer in West Bank micro lab
- 6-pen plotter at SSRFC
- Polaroid Pallette (slide, print, or mini-overhead) at the Cartography Lab (CURA has limited free access to this machine)

1. Chart (manual in computer room)

   This business graphics package includes dozens of default graph types and the flexibility to generate other types beyond. Standard types include variations of bar charts, scatter charts, and pie charts. Publication quality output can be generated using the laser printer. See Appendix A for an example.

2. Atlas*Graphics (manual in computer room)

   This is a mapping package for creating shaded maps or dot maps (e.g. 1 dot = 1,000 jobs). The user controls patterns and class breaks. Labels and values can be superimposed on the map. See Appendix A for sample map. (NB: Atlas can be executed only from its own directory--AG.) As of May 1989, boundary files exist for:

   - Countries of the world
   - States of the U.S.
   - Three-digit zip codes of the U.S.
   - MSAs of the U.S.
   - Counties of the U.S., including...
   - Minnesota counties
   - Minnesota school districts
   - 1986 Minnesota five-digit zip codes,* including...
   - Twin Cities metro five-digit zip codes*
   - Minnesota cities and townships, including...
   - Twin Cities metro cities and townships
   - Twin Cities metro census tracts
   - Minneapolis/St. Paul neighborhoods (communities)

   New boundary files (as well as road overlays, etc.) can be digitized using an ATLAS*DRAW program owned by the Geography Department.

3. Diagraph (manual in computer room)

   This is an easy to use graphic package with much clip art and good text. An example is presented in Appendix A. The package is <u>not</u>

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* These files are generalized so "point" zip codes do not show. A separate file which contains an inventory of all point zip codes will show the encompassing county and zip code for each.

currently loaded on any computer and needs to be "installed" before it can be used. In a unique software design, only one copy can be installed at any one time.

4. Others

Several packages listed elsewhere have graphic output as one option.

- Lotus 1-2-3
- SPSS/PC+
- Graph in the Box (attached to SPSS)
- STATA
- LogiPaint (freehand painting package using a mouse)
- Generic CADD Level 2

E. DATA ENTRY

Though numerous means can be used for entering raw data into the computer, CURA has two programs specifically written for data entry. Both AutoIda and Keypunch can be used to create a data set for analysis by the microcomputers or for use on the University's mainframe systems. A third major option is to use a data base management program. Other options might include using a text or word processor or using a spreadsheet program like Lotus 123. Most software packages will accept data base files prepared on such programs, especially when the format of the file is some standard like ASCII. A few programs demand that data be entered directly or through a conversion program.

1. SPSS Data Entry II (manual in computer room)

   This program is especially designed for entering data for SPSS. Skips and range checks are optional.

2. dBase IV (manual in computer room)

   dBase IV can be used effectively for data entry in some applications. But the complexity of the software sometimes makes the data entry task more difficult than need be if the data is going to be exported to some other analysis package.

3. PC File III Plus (manual in computer room)

   Superior to dBase because of ease of setup.

F. STATISTICAL ANALYSIS

Many programs have some statistical capabilities including the spreadsheet programs, the data base programs, and even the graphics programs. The following have the range and flexibility to meet all but the most unique needs.

1. SPSS/PC+ Version 3.0 (serial #421909, manual in computer room)

   This is the microcomputer version of the popular SPSS. It includes enormous flexibility for data recoding and transformation in addition to fifteen popular statistical procedures. Besides the popular frequency distribution, cross tabulations, and other procedures in the basic package, we have the following add-on modules: TABLES (including multiple response), GRAPHICS (automatic connection to CHART), ADVANCED STATISTICS, and DATA ENTRY. The program has three major advantages over the mainframe computer version (as well as many smaller advantages); it provides graphic output, a built-in editor (REVIEW), and it is interactive. CURA is a Value Plus (#111365) subscriber which entitles us to all updates, telephone consulting (1-800-SPSSEXP), and freedom from the key disk requirement. Installed on most machines in the computer room.

2. STATA (manual in computer room)

   A new package with a focus on visual analysis of data. This approach is much more useful for understanding data and is gaining credibility with statisticians and social scientists. See appendix A for examples. Installed on model 80 only.

G. COMMUNICATIONS

Communications software is used to manage telephone links between two computers. The telephone links are usually made through modems. The software turns the PC into a "smart terminal" for another "host" computer. After logging on, the PC acts like a dedicated terminal for the host computer, but files can be transferred from one computer to the other and back. Thus an SPSS file can be sent to the VAX or Cyber system for analysis, and the results file can be transferred back to the PC and saved on the disk. Or when using online data base such as DIALOG information can be downloaded to your computer.

One very popular use is for electronic mail, BITNET allows people to correspond with others at the University or across the country.

1. PROCOMM (manual in computer room)

   A very powerful communications package. Easy to use and very flexible.

H. PROGRAMMING LANGUAGES

1. Microsoft FORTRAN

2. Turbo Pascal 5.0

I. UTILITIES AND MISCELLANEOUS

Utilities are programs designed to solve particular problems. They give power to the user, but pose a danger of overriding safeguards against fouling things badly. Do not use any unless you are confident; please ask for help if you have any doubts.

1. Norton Utilities, Advanced Edition (manual in computer room)

   Among other things the Norton utilities can restore erased files. Even if a file no longer appears on your directory, this program may be able to recover it if you have not written over it.

2. Diagnostics (in "Guide to Operations" manual for each computer)

   The diagnostic programs use your computer's power to examine itself for problems. These diagnostics are an easy first step for determining what is wrong with your computer. To avoid permanent damage, this program should be run to "park the heads" off the hard drive when moving.

3. Review (see SPSS manual)

   This text editor came with SPSS, but it may be used independently. On-line help is available (F1). Text editors produce ASCII files with no embedded print controls or other extraneous characters. Access by typing "SPSSPC/RE filename."

4. ARC (manual in computer room)

   This is a public domain package for compressing files. Very useful for backing-up large files from hard disk to floppy.

5. Laser Programs (no manual, menu driven, written by John Easton, SSRFC)

   LASER66, LASER, EJECT used for setting up laser printers, especially for software programs other than graphics and word processors.

6. EasyLAN (manual in computer room)

   For sharing files across computers.

7. Multifunction Card Software (documentation on each disk)

   RAM disk, print spoolers, etc.

   a. BONUS
   b. AST Superpack
   c. PERSYST

8. Brooklyn Bridge 2.0 (manual in computer room)

   Cable and software for transferring files between computers, e.g., uploading files from Z-181 portable computer.

9. Hotshot (manual in computer room)

   A program for "grabbing" screens and printing them.

10. Grammatik II (Louise Duncan has manual)

    This is a useful editor program for writers. It checks punctuation, the use of passive voice, and notes possibly misused words.

11. R-Doc/X (Louise Duncan has manual)

    Converts text files, including printer and format controls among many programs, e.g., Wordstar, XyWrite, Multimate, Word Perfect, and ASCII (see also XWord in Appendix B).

12. QEDIT (Scott Parks has manual)

    Full screen text editor (ASCII). Great for programming or making quick updates to files.

13. DELBUT

    Erases files in a subdirectory except for those specified.

14. DOSEDIT

    DOS command line buffer and editor. Use up arrow to scroll through prior commands. Move on line using arrows, home and end keys. Can use Ins or Del keys to edit line (memory resident utility).

15. PKPAK and PKUNPAK

    Archiver utility: use PKPAK/H for help. Un-archiver utility: use PKUNPAK/H for help.

16. CUBIT

    Compresses data files and automatically de-compresses them when they are needed (memory resident utility). You must first compress the files manually in order for the automatic features to work.

17. MAGIC MIRROR

    Allows data capture and transfer--you can copy data from one application to another (memory resident utility).

18. DISK OPTIMIZER

    Reunifies fragmented files--"cleans up" disks.

19. SOFTWARE CAROUSEL

    Allows instantaneous switching from one application to another (memory resident utility).

20. DOUBLE DOS

Allows the concurrent runnning of two programs--"multi-tasking."

IV. DATA BASE DIRECTORY

Often the most expensive part of a research project is collecting the data and getting it into the computer. CURA has developed and purchased data bases which are available for use by others. They are both general and specific in nature.

A. CITY AND COUNTY DATA BOOK

All the data that can be found in the published report; this includes dozens of statistics from many data sources including the Census of Population, Census of Agriculture, and much more. We have purchased the 1983 CCDB for all U.S. states and for Minnesota counties and cities over 25,000.

B. MINNESOTA SCHOOL DISTRICTS

For each of Minnesota's 437 school districts, we have data from the 1980 U.S. Census of Population and 1982-83 State Department of Education reports. These twenty-three data items may be characterized as documenting three areas: the community environment, the school environment, and financial information.

C. METROPOLITAN AGRICULTURAL PRESERVES SURVEY

Over 500 farmers responded to a survey about their current and anticipated farming activity. The sample was split between those currently enrolled in the Agricultural Preserves Program and those who have not. Each group was also asked its feelings towards the program and suggestions for improvement.

D. DAY CARE WORKERS SURVEY

The results of a survey of Minnesota day care centers. Staff characteristics as well as financial data were collected.

E. NORTHWEST AREA FILE

This file was created for a 1987 study for the Northwest Area Foundation by Will Craig and John Borchert. Current and historical data are contained for all 481 counties. Topics include population/race, employment by industry and sector, income, age, natural increase and migration, and government revenue and expenditures.

F. SURVEY DATA

All MCSR data are available to the public. This includes special surveys as well as state (since 1984) and metro (since 1982) omnibus surveys.

G. CURA MAILING LIST

This list of 3,000 names and addresses is the basis for the CURA Reporter. (Agriculture Extension agents and Deans-Directors-Department Heads make up the remainder.) Most names are keyed by interest area (twelve areas) for focused mailing.

H. DIALOG

DIALOG is an enormous bibliographic and resource data base. CURA subscribes to this service. Different data bases within DIALOG focus on different topics. This service is accessed over telephone lines through a modem. Peggy Wolfe has the protocol for this system. There is a charge for this service.

I. DATANET

CURA subscribes to this wide-ranging data source at the Minnesota State Planning Agency. Many topics are covered. Access is useful for gathering facts, but not developing a research database; requests are made for single attributes about single places.

J. POLLS

This database is maintained by the Roper Center at the University of Connecticut. It contains data about public opinion polls by Gallup, Harris and others, from 1936 to the present.

V. HARDWARE DIRECTORY

A. COMPUTERS

All computers are numbered (in this directory and on the left side of the basic CPU unit).

1. Word Processing Computers

Located in quad 324. Each is available on a first come, first served basis. Supplied with DOS and XyWrite III Plus. (Please do not remove this disc from the A drive.) These computers share the letter quality HP Deskjet printer, using a switch box.

Number	Computer	Location	Memory
9	Z150	Computer module A (324B)	640K
11	IBM-PC	Computer module C (324C)	640K
16	IBM-PC	Computer module B (324D)	640K (note: this machine is owned by AUCA)

2. Computer Room Machines (scientific computers)

Located in room 348. These machines have power to do data analysis and graphic presentation. Priority is given to those uses over any text processing.

Number	Computer	Memory	Hard Disk Capacity	Comments
1	IBM PS/2 Model 50Z	1.0MB	30MB	Hard drive has 39ms access time (moderate). Floppy is 3 1/2". Math coprocessor.
2	IBM-AT*	640KB	30MB	Enhanced graphics color monitor. (A drive is 1.2MB.) Math coprocessor.
3	IBM-PS2 Model 80*	640KB	70MB	Our most powerful machine. Both 3 1/2" and 5 1/4" floppy disk drives. Math coprocessor. Activate mouse by typing "MOUSE" in DOS. The dot matrix Proprinter is the connected printer unless the user selects the Personal Pageprinter. This

* Carry-in service contract.

				alternative selection is made by either responding positively (Y) to the question of whether to install the "printer drivers" when the machine is first booted up, or by typing "PRINTER" while in DOS.
18	Z160	320KB	__	Primary use for those wanting to print using the HP Laser printer. (note: this machine is owned by MCSR)

3. Desktop Publishing/Production

Located in central office area. This area is staffed by Chris McKee and Louise Duncan. They are responsible for producing proofed manuscripts for CURA publication. They have special full-page monitors, networked computers, and a Laserjet Plus printer.

Number	Person/Office	Machine	Memory	Comments
6	Chris McKee	IBM-PS/2 Model 50*	1.0MB	These two machines exchange files via a LAN. The XT has a 20MB hard disk. (The A drive on the XT is 1.2MB.) Both machines have large screen monitors. The model 50 has a 30MB hard drive with 80ms access time (slow).
7	Louise Duncan	IBM-XT 286*	640KB	
17	Production	IBM-PC	512KB	Connected to HP Laserjet Plus.

4. Accounting

These have been purchased by, or assigned to, key personnel. They are listed here so those people know their machine's characteristics and others can seek and request special features.

Number	Person/Office	Machine	Memory	Comments
15	Brenda Splettstoesser	Z248**	512KB	AT type machine with 20MB hard drive. Used for the CURA Accounts Package (see Appendix E). (A drive is 1.2MB.)

* Carry-in service contract.

19	Accounting	IBM-XT**	640KB	10MB hard disk. Mach 20 accelerator board.

5. Portable Machines

These can be moved to office or home for special projects, never for personal work. There is a four-day limit. Machines may be checked out or reserved through the front desk.

Number	Computer	Memory	Comments
4	Z160	320KB	Comes on a cart with its own printer.
--	TRS 80 Model 100	24KB	Weighs under 5 pounds. Built-in word processor and modem. Files can be printed or uploaded to IBM-PC. See Appendix F.

6. Personal Computers

These have been purchased by, or assigned to, key personnel. They are listed here so those people know their machine's characteristics and others can seek and request special features.

Number	Person/Office	Machine	Memory	Comments
5	Peggy Wolfe	IBM-XT	640KB	10MB hard disk
8	Reception Area	Z-160	320KB	
10	Ollie Byrum	Z-158	640KB	
12	Fred Smith	IBM-PC	320KB	
13	Ed Duren	IBM-PS/2 Model 30	640KB	20MB hard disk.
14	Shirley Bennett	Z-150	640KB	Runs Framework
--	Tom Anding	Z181	640KB	Full power, 11 pound laptop. Excellent screen for laptop. Runs all software graphics and text. Two 3 1/2" floppies.
--	AUCA	IBM-XT	512KB	20 MB hard disk. Available for general use after 4:30 p.m. Only Microsoft Word user. (note: this machine is

** On-call service contract, including replacement machine if necessary.

				owned by CURA)
--	Barbara Lukermann	IBM-PC	512KB	Personally owned machine. Mach 20 accelerator board.
--	SARS	IBM-PS/2 Model 50Z	1.0MB	30MB hard drive with 39ms access time (moderate).
--	Tom Scott	Z183	640KB	Same as Z181, but 10MB hard disk replaces one floppy; 16 pounds.

B. PRINTERS (see GRAPHICS software section for a list of other output options)

Printers vary in speed and in quality of output, only four can produce letter quality. The two Laserjets are in multi-computer rooms and may be used by any computer in those rooms; computer selection is accomplished with a switch box.

Printer	Location (Room)	Quality	Width	Speed
Epson MX-80	accounting (341)	draft	8 1/2"	80 cps
Epson MX100	Bennett (345)	draft	14"	80 cps
HP Deskjet*	word processing (324D)	draft/ letter	8 1/2"	240 cps/ 120 cps
HP Thinkjet	reception (330)	draft	8 1/2"	140 cps
HP Thinkjet	travels with cart	draft	8 1/2"	140 cps
HP Thinkjet	travels with Z181	draft	8 1/2"	140 cps
HP Thinkjet	travels with Z180	draft	8 1/2"	140 cps
HP Thinkjet	Splettstoesser (340A)	draft	8 1/2"	140 cps
HP Laserjet Plus**	production (L334)	letter	8 1/2"	325 cps
HP Laserjet*	word processing (324C)	letter	8 1/2"	325 cps
HP Laserjet II	SARS (320)	letter	8 1/2"	325 cps
IBM Graphics	SARS (320)	draft	8 1/2"	80 cps
IBM Graphics	storage	draft	8 1/2"	80 cps

* Carry-in service contract.
** On-call service contract, including replacement machine if necessary.

IBM Personal Page-printer*	computer room (348)	letter	8 1/2"	480 cps
IBM Proprinter X-24	computer room (348)	draft/ letter	8 1/2"	160 cps/ 40 cps
Okidata Microline 92	Wolfe (347)	draft	8 1/2"	160 cps
Okidata Microline 93	Lukermann (325)	draft	14"	160 cps
Qume	AUCA (322)	letter	14"	45 cps

C. MONITORS

The monitor is the screen on which each computer presents results. All computers can present text, only a few can show graphics. Monochrome screens can be green or amber. The list below presents the salient features of CURA's monitors.

1. Text monitor. This describes virtually all monitors attached to the IBM brand computers. These monitors show text at its best but cannot display graphics.

2. Graphics monitor. This monitor was standard with the early Zenith computers (Z-150 and Z-160). They can present text, but the edges of characters are rough.

3. Hercules Graphics monochrome monitor. These machines can show both text and graphics well. Our new Zenith machines (Z-158 and Z-248) are in this category.

4. High resolution/special monitors:

   a. The EGA (Enhanced Graphics Adapter) monitor on the AT can show 16 color graphics plus great text. Resolution of 640 x 400. Allows up to 43 lines per screen in certain applications.

   b. The VGA (Video Graphics Array) monitor on the IBM PS/2 model 80 can show 256 colors at a resolution of 320 by 200, or sixteen colors at twice the resolution. PS/2 model 50s have VGA monochrome monitors. Allows up to 50 lines per screen in certain applications.

   c. Full page monitors for desktop publishing. Louise Duncan has a MDS (Micro Display System) Genius monitor. Chris McKee has a

* This is a very high quality laser printer using Postscript. Not all programs have a Postscript driver; Xywrite and Microsoft Chart can use this printer using device 'APLASER.' This printer is on an EPT: adapter, but often accepts LPT1:. SPSS files can be printed through Xywrite, but not directly.

Monitor Viking Portrait monitor. Both are manufactured locally and have excellent national reputations.

5. Laptop monitors. These are built-in and often the weakest part of these machines. The screen on the Z-181, however, received high marks for readability.

D. MODEMS

CURA has three modems which allow computers to communicate over telephone lines. The units are similar: two Hayes 1200 smart modems and one IBM 2400 baud modem. These allow high speed communication. One modem is connected to the library IBM-XT, one to the Macintosh in Will Craig's office, and one on the IBM PS/2 model 80.

APPENDIX A: SAMPLE OUTPUT

Volume 7, Number 2 Spring 1987

A publication of the Southeast Asian Refugee Studies Project, Center for Urban and Regional Affairs, University of Minnesota.

The Southeast Asian Refugee Studies Project has been established to encourage, coordinate, and support research related to refugees from Southeast Asia who have been resettled in the United States.

CIA Film Donated to SARS

A film depicting the armed resistance of Hmong tribesmen against the Vietnamese and Pathet Lao Communist forces in Laos has been donated to the Southeast Asian Refugee Studies Project by a U.S. Air Force officer who was assigned in Laos in 1972-3. The officer, who prefers to remain anonymous, obtained "Journey from Pha Dong" from the Central Intelligence Agency under the provisions of the Freedom of Information Act in 1983.

The one-hour, 16-millimeter color film was produced in about 1967. One of its apparent goals is to acknowledge the leadership and bravery of Major General Vang Pao. Beyond that, "Journey from Pha Dong" shows how a group of tribal people is trained and organized to fight. The film portrays the creation of schools to teach Hmong boys nationalism and literacy, the transport of a select group of children to Thailand to be educated for leadership positions, the transmission of radio broadcasts to unify Lao minority groups, the training of peasants to use sophisticated weapons, the building of airplane landing strips and roads, and the economic changes brought about by the war. In one scene, a Hmong woman scrapes up rice that fell in the dirt after an American air drop. In a post-battle scene, letters and strategy notebooks positively identifying the attackers as North Vietnamese are taken from the dead.

A free showing of the film, open to the public, is being sponsored by SARS and the United Laotian Student Association of the University of Minnesota. It will be held at Willey Hall, Room 175, on the West Bank of the University of Minnesota campus on Friday, May 29, at 7:30 p.m. A lecture by war historian Timothy N. Castle will follow the showing. A 1/2" VHS videotape made from the film is available for rental from University Film and Video, University of Minnesota, 1313 Fifth St. S.E., Suite 109, Minneapolis, MN 55414; phone (612) 627-4270. The rental fee is $15.

Videotape Gives Rare Glimpse of Modern Laos

"A Journey to Laos" conveys what six former International Voluntary Services volunteers observed when they returned to Laos for three weeks in January 1986, after an absence of more than 10 years. The 45-minute color video was produced by Jacqui Chagnon and Roger Rumpf, two American Friends Service Committee Workers. The video portrays a country that is thriving, with bustling marketplaces, busy streets, successful irrigation projects, and New Year festivities that include a rock-and-roll dance in Vientiane, and a traditional Hmong celebration in a mountain village.

Attention then turns to the devastation caused by American bombing in Laos, and the continued danger to farmers from unexploded "bomblets." "The videotape can be strongly recommended for church, protest, and other groups that want to continue to inform their audiences of the responsibilities of United States actions in Southeast Asia and in the rest of the world," according to the videotape's promotional material.

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University Film and Video of Minneapolis has acquired a VHS videotape, which can be rented by University of Minnesota faculty members only. "Journey to Laos" can be purchased for $50 or it can be rented for $25 for one week in any videotape format from Asia Resource Center, P.O. Box 15275, Washington, D.C. 20003; phone (202) 547-1114.

New Wave of Hmong Expected

About 9,000 Hmong refugees have entered or will enter the United States during Fiscal Year 1987 (Oct. 1, 1986, to Sept. 30, 1987), the largest group to come to this country in any year since 1980. About 4,500 refugees from the highlands of Laos had arrived by the end of April; most of the remainder are expected to arrive in late summer.

Because the new arrivals are coming to rejoin their relatives, State Department officials anticipate that they will distribute themselves according to the distribution of Hmong

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Sample of smaller (8 point) font:

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Sample of unjustified text:

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A sample of less inter-line spacing:

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A sample of more inter-line spacing:

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Sample of a bullet:

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Figure 2. COMMUNITY ARTS ORGANIZATIONS BY REGION

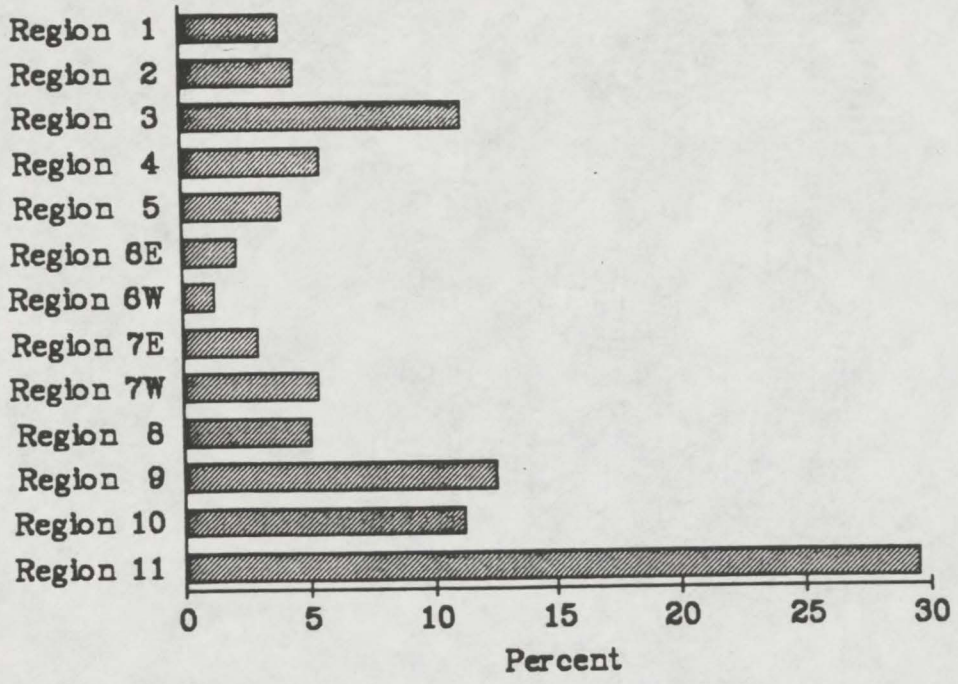
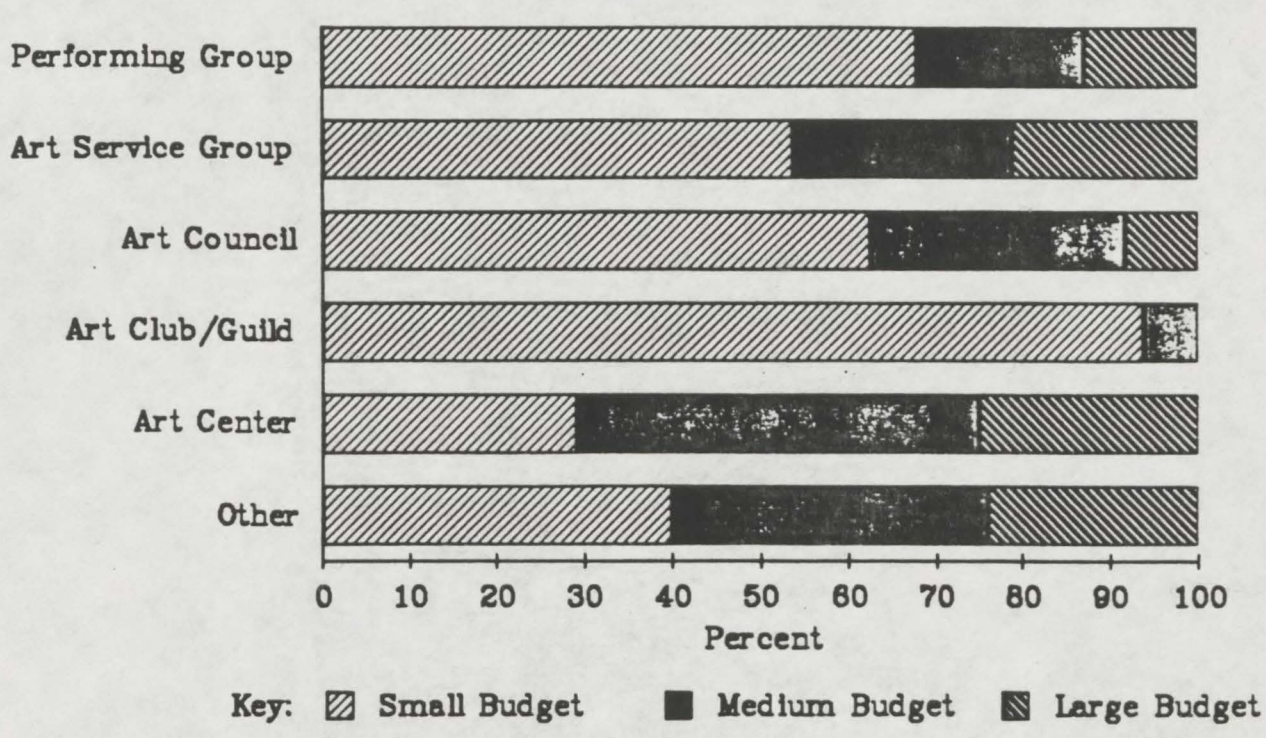
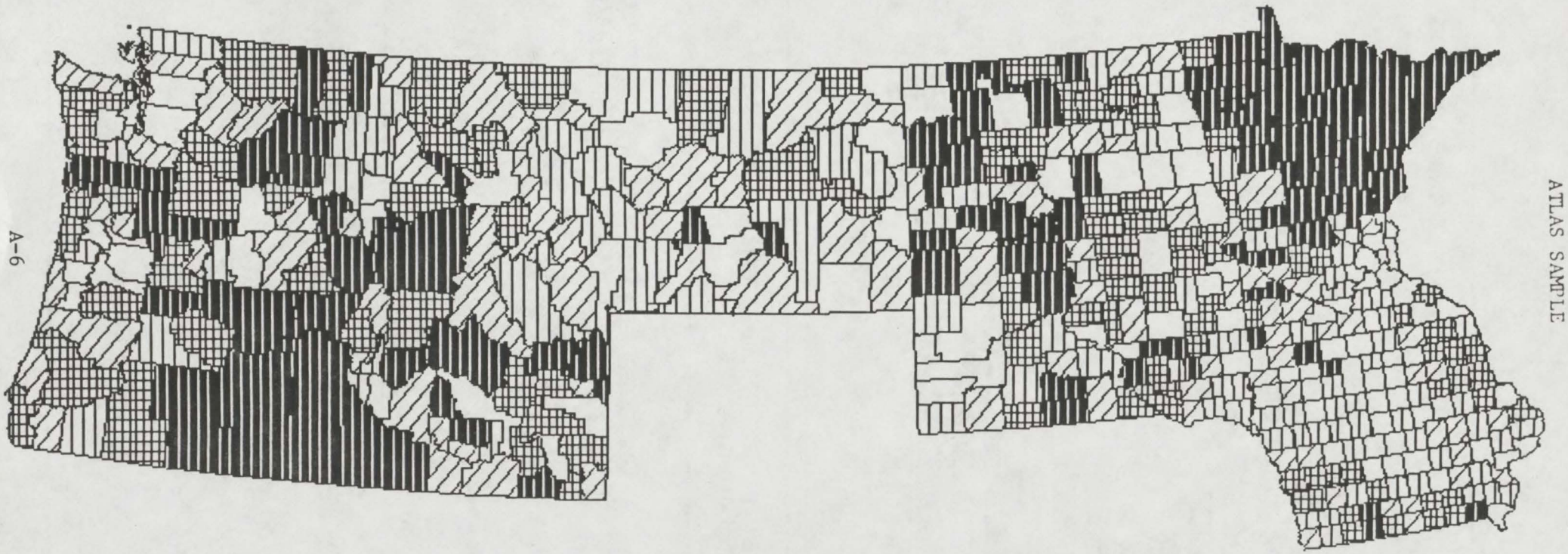


Figure 6. COMMUNITY ARTS ORGANIZATIONS BY INSTITUTIONAL TYPE AND BUDGET SIZE

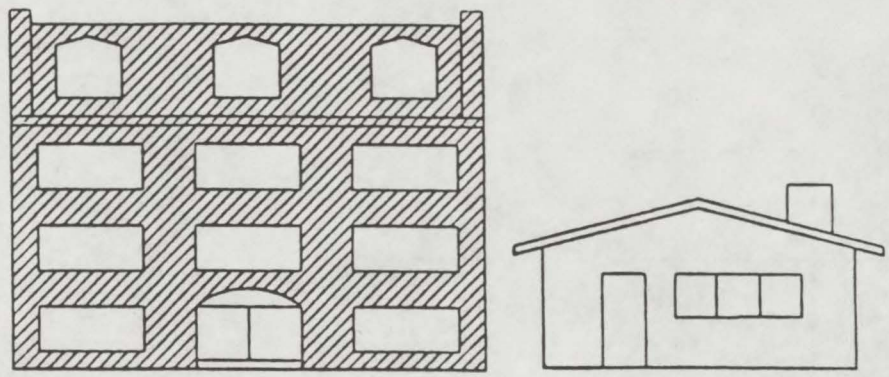


NETPC

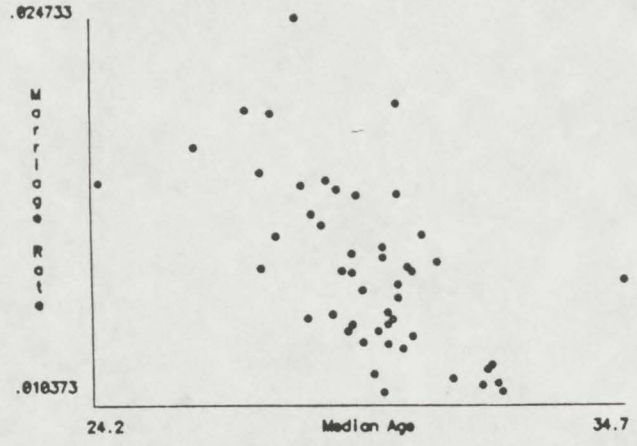


DIAGRAPH SAMPLE

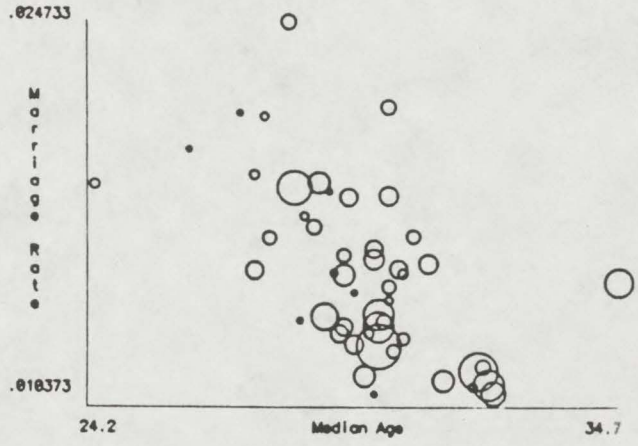
University of Minnesota Student Housing Survey



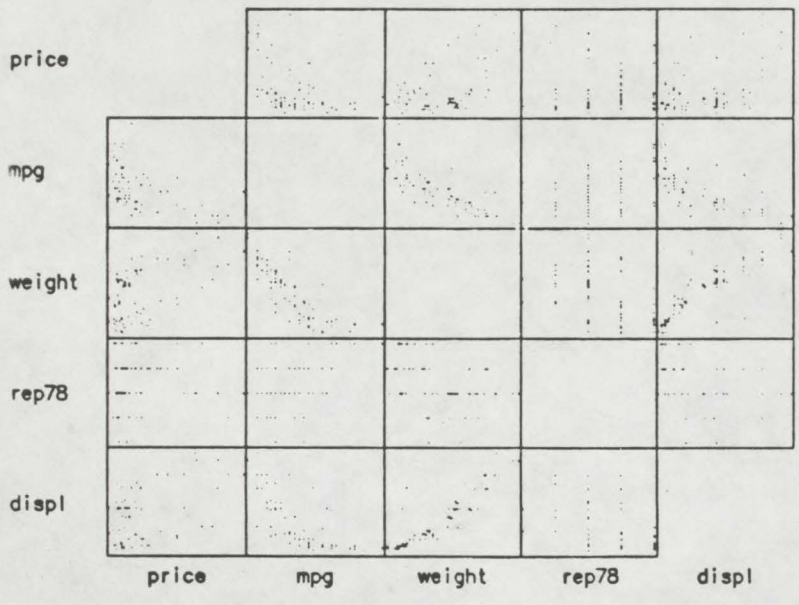
Center for Urban and Regional Affairs
University of Minnesota
Minneapolis, MN 55455



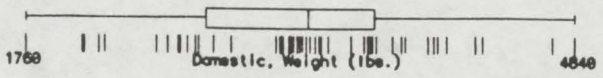
scatter plot

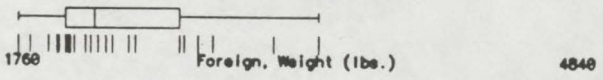


scatter plot with circle size showing state population

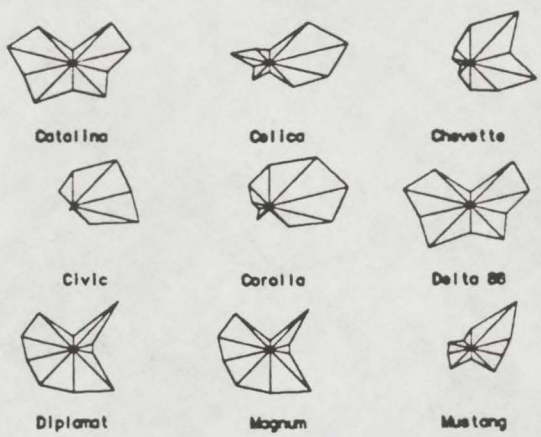


five variable scatter plot matrix

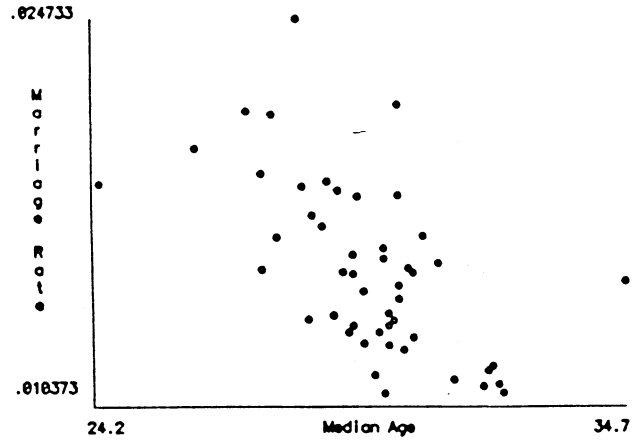




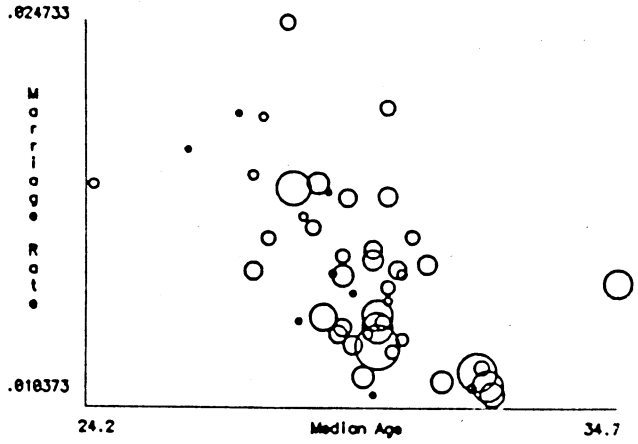
frequency distribution and box plot
(showing median and quartile breaks)



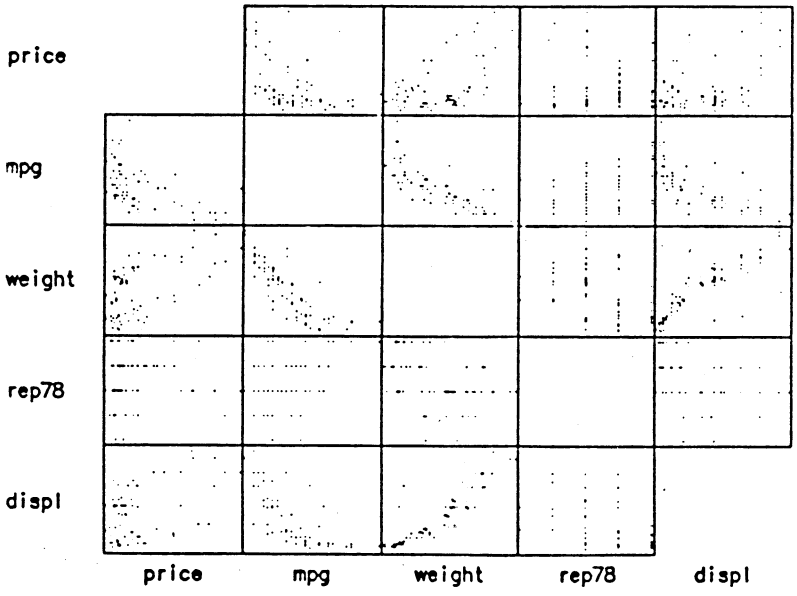
star diagrams: length of each radial line determined by one variable, e.g., miles per gallon



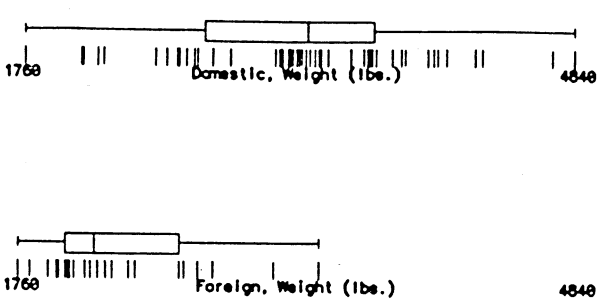
scatter plot



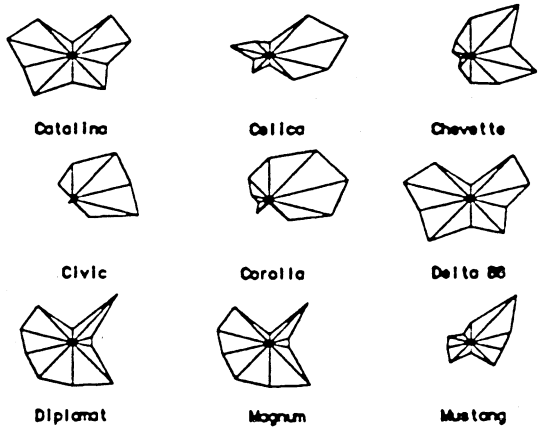
scatter plot with circle size showing state population



five variable scatter plot matrix



frequency distribution and box plot
(showing median and quartile breaks)



star diagrams: length of each radial line determined by one variable, e.g., miles per gallon

APPENDIX B: SUPPLEMENTAL SOFTWARE

Over the years CURA has acquired software that is less used or outmoded. This software still exists and is listed her to complete this directory.

Multiplan--a powerful spreadsheet program

Autoida--a simple survey data entry program

Keypunch--another simple data entry program; this one simulating a drum card

Framework--a package integrating spreadsheet, data base, and word processing applications

PC TALK--a simple communications program

Windows--a user platform that allows running many programs at once. The "operating system" of the future.

Mail Merge--works with WordStar

DMP--print spooler

MapEdit--an older digitizing package for ATLAS. Superceded by ATLAS*DRAW.

dBaseIII Plus--older version of dBase

APPENDIX C: COMPUTERS IN REMOTE OFFICES

CONFLICT AND CHANGE PROJECT

Hardware

IBM XT with dual floppy disk drive, 512K memory
Standard Turbo 88
HP Laser Jet 33440-A (Laser Jet Series II)
Epson LQ1000 printer

MINNESOTA CENTER FOR SURVEY RESEARCH

Software

Ci2 and CODER (computer assisted telephone interviewing)
PC File III
Supercalc 4
Wordstar 4
Norton Utilities
Story Board (slide show)
ProComm
Ingress

Hardware--Computers

1-IBM-AT, 512KB RAM, 20MB hard drive, 1-1.2MB floppy, 1-356KB floppy math co-processor
1-IBM-XT, 640KB RAM, 20MB hard drive, 2-356KB floppy
1-IBM-PC, 256KB RAM, 2-356KB floppy drives
1-IBM-PC, 320KB RAM, 2-356KB floppy drives
1-IBM PS/2 model 50Z, 1.0 MB RAM, both 3 1/2" and 5 1/4" floppy drives, math co-processor

Hardware--Printers

Diablo, daisy wheel, letter quality, 30 cps
ThinkJet, draft quality, 140 cps
IBM Graphics, draft quality, 80 cps
HP LaserJet II, letter quality, 325 cps

Hardware--Modems

2-Hayes compatible

Data

SIPP (Survey of Income and Program Participation)
Dozens of individual surveys

APPENDIX D: MACINTOSH, THE OTHER COMPUTER

CURA owns two Apple Macintosh computers. Though these are very powerful computers, they are fundamentally incompatible with the IBM-type micro-computers described in the body of this document; through various mechanisms these machines can share text and data, but never software.

The first of these machines is a Macintosh SE located in Will Craig's office (328). This machine was obtained on a MinneMac grant to develop mapping software. It has one internal 800KB floppy drive and one 20MB hard disk drive. The printer is a (Apple) Laser Writer Plus with very high resolution.

The second machine is a standard Mac, though with an upgraded processing unit. The location of this machine is variable; through most of 1988-89 it has been on loan to the Humphrey Exhibit project. The internal disk drive has 800KB capacity; the external drive is 400KB. The printer is an Imagewriter.

Software for these machines includes:

- MacWrite (4.6)--an elementary word processor
- MacPaint--a freehand drawing program
- MacDraw--an object oriented engineering drawing program
- MacTerminal--a communications program
- MacProject--a tool for managing projects
- MacSpin--3-D plots of data to help identify relationships
- MicroSoft Word--a sophisticated word processor
- MicroSoft Chart--business graphics
- Map Maker--similar to Atlas (U.S. State and Minn. County base maps)
- Certificate Maker--self descriptive
- MicroSoft File--data base management

APPENDIX E: CURA ACCOUNTS PACKAGE

CURA has developed its own system for keeping track of its budget and transaction. The package is a sophisticated dBase application written by Terry Schmidt. The system has been successfully installed and current budgets and transactions are being loaded. When fully operational, the system will be able to produce the following reports:

1. Expense list sorted by:

   project, fund, department, budget number, and ledger date, or,

   fund, department, project, budget number, and ledger date.

   Subtotaled on amount.

2. Amount spent, amount budgeted and difference in 15 categories (salary, travel, computer supplies, etc.) by month. Sort by fund, department, project or project, fund, department.

3. List of encumbrances outstanding by fund and department.

4. Income list sort as in number 2, above.

5. Alphabetic list of projects.

6. Alphabetic list of employees

APPENDIX F: PRINTING AND UPLOADING FILES FROM THE TRS80 MODEL 100

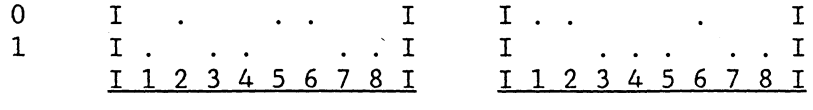
INTRODUCTION

The TRS80 Model 100 is CURA's portable computer. The small size of this machine makes it ideal for word processing at home or on trips. This machine can be checked out overnight through Ann Kelley, our Office Manager. This brief guide will help you get your files out of the TRS80 and on to paper or into another machine for further editing or fancier printing. A HP Thinkjet printer can be checked out with the TRS80 and carried to a remote location for printing your files (minor modifications may be necessary--they are explained below). A section on uploading files to an IBM computer will be of interest if you wish to edit your files using XyWrite or pass the file to another printer. This guide is not meant to be a comprehensive introduction to using the computer. It only covers these two chores; we have several books to help you use the word processing and other software that is built into the Model 100.

PRINTING

The computer should be connected to the HP Thinkjet printer with the flat TRS80 cable (in the carrier pocket), not the round cable that is usually used with the Zenith. "Print" will print the screen and "shift-print" will print the entire file.

If the printer has been used with the Model 100 most recently, things should work fine. If all the printing is on one line or is compressed, the printer may have been set for use with a Zenith computer and the settings need to be changed. If this is the case, printing files will require a change in the dip switch settings on the back panel of the Thinkjet.



switch settings for Zenith

switch settings for Model 100

(Note: only switches 1 and 5 are different.)

The printer reads these switches only when it is first turned on. If you change the switches, turn the printer off and then back on.

It is possible to get compressed output to save paper on long files. See the printer manual for the proper procedure.

UPLOADING

These instructions will create a copy of your file on floppy disk where it can be read by XyWrite or other word processing packages in the IBM world. If XyWrite is your goal, this file can be read using the standard CALL command with the file name.

These are the directions for uploading a file from the TRS80 Model 100 to the IBM PC-XT in the library. First, the Model 100 must be connected to the IBM. Use the round gray cable from the carrying case. Plug one end (male) into the Model 100's RS-232c port; and the other end (female) into the unused serial port on the back of the IBM-PC XT (see instructions--number 1 below).

1. Disconnect modem cable at back of IBM. Connect cable that is with the TRS80 between it and the modem port on the IBM.

To prepare IBM for receiving a file, have a disk in a:drive.

2. procomm [ENTER]

3. [SPACE]

4. alt D

5. 1 [ENTER]

6. pg dn

7. 7

8. filename (e.g. a:bits.1) [ENTER]

To prepare TRS80 for uploading

9. TRS80 on menu, cursor on telecom [ENTER]

10. F4

11. F3

12. filename [ENTER]

13. 78 [ENTER]

When text stops scrolling by on IBM screen, uploading is finished. To leave, do the following:

on the IBM:

14. esc

15. alt X

16. Y

on the TRS80:

17. F8

18. Y [ENTER]

19. F8

then,

20. Reconnect modem cable to rear of IBM

21. Store TRS80 cable and turn it off

File on your disk is in ASCII and can be read directly in Xywrite. Addition of format commands and some clean-up will be necessary.

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